

APPENDIX O-2.

Interaction Tables for the Immunology Assessment

This appendix contains exposure analyses results of interactions between covariates and group or dioxin. Results are presented for separate strata of the covariate and include sample sizes, percent abnormal, relative risks, confidence intervals, and p-values for discrete dependent variables. Sample sizes, adjusted means, differences of adjusted means and confidence intervals or adjusted slopes and standard errors, and p-values are given for continuous dependent variables. Means are transformed back to the original scale, if necessary. Chapter 7, Statistical Methods, provides further details on the analytical approaches used in the interaction analyses. The covariate involved in the interaction and a reference to the analysis table in Chapter 19 are given in the heading of each subtable. A summary of the interactions described in this appendix follows.

Appendix O-2 Table	Chapter 19 Table	Dependent Variable	Model	Covariate
O-2-1	19-4	Composite Skin Test Diagnosis	3 6	Current Alcohol Use Occupation
O-2-2	19-5	CD3 Cells	2 3	Occupation Age, Occupation
O-2-3	19-6	CD4 Cells	3	Age, Occupation
O-2-4	19-7	CD5 Cells	2 3	Occupation Age, Occupation
O-2-5	19-8	CD8 Cells	2 3 4	Occupation Age, Occupation Occupation
O-2-6	19-9	CD14 Cells	3	Age
O-2-7	19-10	CD16 + 56 Cells	2 3	Occupation, Physical Activity Index Occupation, Lifetime Alcohol History, Physical Activity Index
O-2-8	19-11	CD20 Cells	1 2	Lifetime Alcohol History Age
O-2-9	19-12	CD25 Cells	3 6	Age, Occupation, Lifetime Cigarette Smoking History, Lifetime Alcohol History Lifetime Cigarette Smoking History
O-2-10	19-13	CD4-CD8 Ratio	1	Physical Activity Index

Appendix O-2 Table	Chapter 19 Table	Dependent Variable	Model	Covariate
O-2-11	19-14	Double Labelled Cells: CD3 with CD25	3	Occupation, Lifetime Cigarette Smoking History, Lifetime Alcohol History
			6	Lifetime Cigarette Smoking History
O-2-12	19-16	Double Labelled Cells: CD4 with CD8	2	Race, Current Cigarette Smoking, Lifetime Alcohol History
			3	Age, Race, Occupation
O-2-13	19-17	Double Labelled Cells: CD3 with CD16 + 56	2	Occupation
			4	Physical Activity Index
			5	Physical Activity Index
			6	Physical Activity Index
O-2-14	19-18	TLC	2	Physical Activity Index
			3	Age
O-2-15	19-19	IgA	3	Race
O-2-16	19-20	IgG	3	Occupation
O-2-17	19-21	IgM	1	Race, Physical Activity Index
			3	Physical Activity Index
			4	Current Alcohol Use
O-2-18	19-22	Lupus Panel: Antinuclear Antibody (ANA)	3	Lifetime Alcohol History
			4	Race, Lifetime Alcohol History
			5	Race, Lifetime Alcohol History
			6	Race, Lifetime Alcohol History
O-2-19	19-23	Lupus Panel: Thyroid Microsomal Antibody	1	Current Cigarette Smoking, Current Alcohol Use, Lifetime Alcohol History
			2	Current Cigarette Smoking, Lifetime Alcohol History
			3	Current Cigarette Smoking, Current Alcohol Use, Lifetime Alcohol History
			4	Current Alcohol Use
O-2-20	19-26	Lupus Panel: Parietal Antibody	1	Race
O-2-21	19-27	Lupus Panel: Rheumatoid Factor	2	Age, Occupation
			3	Occupation, Physical Activity Index
O-2-22	19-28	Lupus Panel: B Cell Clones Detected By Serum Protein Electrophoresis	5	Current Alcohol Use
			6	Current Alcohol Use
O-2-23	19-29	Lupus Panel: Other Antibodies (ANA and MSK)	6	Race

Table O-2-1.
Interaction Table for Composite Skin Test Diagnosis

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table 19-4)					
Stratum	Dioxin Category	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0-1 Drinks/Day	Comparison	797	2.8		
	Background RH	274	5.5	1.71 (0.86,3.38)	0.126
	Low RH	191	4.7	1.74 (0.78,3.90)	0.177
	High RH	205	2.4	1.04 (0.38,2.84)	0.935
>1 Drinks/Day	Comparison	207	3.9		
	Background RH	82	8.5	1.96 (0.67,5.71)	0.217
	Low RH	58	1.7	0.51 (0.06,4.20)	0.532
	High RH	45	0.0	--	--
	Low plus High RH	103	1.0	0.28 (0.03,2.29)	0.234

b) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 19-4)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Officer	Low	185	4.3	1.26 (0.74,2.12)	0.395
	Medium	130	6.9		
	High	20	0.0		
Enlisted Flyer	Low	32	6.3	0.50 (0.26,0.96)	0.038
	Medium	54	7.4		
	High	60	0.0		
Enlisted Groundcrew	Low	70	11.4	0.74 (0.56,0.97)	0.029
	Medium	102	2.0		
	High	210	1.9		

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

--: Relative risk, confidence interval, and p-value not presented due to sparse number of abnormalities.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Model 6: Low = \leq 46 ppq; Medium = $>$ 46-128 ppq; High = $>$ 128 ppq.

Table O-2-2.
Interaction Table for CD3 Cells (cells/mm³)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-5)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	31	1,545.4	0.036 (0.091)	0.718
	Medium	13	1,949.2		
	High	1	2,208.7		
Enlisted Flyer	Low	16	1,614.5	-0.128 (0.108)	0.276
	Medium	20	1,523.9		
	High	11	1,662.0		
Enlisted Groundcrew	Low	17	1,516.4	-0.025 (0.036)	0.502
	Medium	32	1,472.7		
	High	59	1,393.0		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-5)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d
Born ≥ 1942	Comparison	183	1,453.6		
	Background RH	47	1,410.8	-42.8 --	0.654
	Low RH	21	1,621.4	167.8 --	0.235
	High RH	65	1,509.9	56.3 --	0.511
	Low plus High RH	86	1,536.4	82.8 --	0.291
Born < 1942	Comparison	217	1,443.4		
	Background RH	93	1,562.1	118.7 --	0.114
	Low RH	74	1,360.4	-83.0 --	0.272
	High RH	41	1,481.9	38.5 --	0.703
	Low plus High RH	115	1,402.5	-40.9 --	0.537

Table O-2-2. (Continued)
Interaction Table for CD3 Cells (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-5)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
Officer	Comparison	139	1,422.7		
	Background RH	99	1,486.1	63.4 --	0.400
	Low RH	39	1,420.3	-2.4 --	0.981
	High RH	6	2,555.4	1,132.7 --	<0.001
	Low plus High RH	45	1,536.0	113.3 --	0.497
Enlisted Flyer	Comparison	74	1,521.3		
	Background RH	13	1,511.0	-10.3 --	0.954
	Low RH	25	1,406.8	-114.5 --	0.397
	High RH	22	1,356.4	-164.9 --	0.235
	Low plus High RH	47	1,383.0	-138.3 --	0.192
Enlisted Groundcrew	Comparison	187	1,425.5		
	Background RH	28	1,585.2	159.7 --	0.184
	Low RH	31	1,432.4	6.9 --	0.951
	High RH	78	1,458.5	33.0 --	0.668
	Low plus High RH	109	1,451.0	25.5 --	0.730

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of CD3 cells versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-3.
Interaction Table for CD4 Cells (cells/mm³)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-6)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Born ≥ 1942	Comparison	183	933.6		
	Background RH	47	912.2	-21.4 --	0.733
	Low RH	21	1,082.9	149.3 --	0.114
	High RH	65	977.3	43.7 --	0.437
	Low plus High RH	86	1,002.1	68.5 --	0.186
Born < 1942	Comparison	220	917.6		
	Background RH	94	986.2	68.6 --	0.154
	Low RH	74	861.8	-55.8 --	0.251
	High RH	43	958.4	40.8 --	0.526
	Low plus High RH	117	896.1	-21.5 --	0.614

Table O-2-3. (Continued)
Interaction Table for CD4 Cells (cells/mm³)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Occupation: Table 19-6)

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Officer	Comparison	141	934.1		
	Background RH	99	966.0	31.9 --	0.522
	Low RH	39	916.1	-18.0 --	0.789
	High RH	6	1,618.7	684.6 --	0.001
	Low plus High RH	45	988.3	54.2 --	0.415
Enlisted Flyer	Comparison	74	957.8		
	Background RH	14	964.5	6.7 --	0.953
	Low RH	25	897.2	-60.6 --	0.488
	High RH	23	881.0	-76.8 --	0.386
	Low plus High RH	48	889.4	-68.4 --	0.321
Enlisted Groundcrew	Comparison	188	896.2		
	Background RH	28	994.3	98.1 --	0.202
	Low RH	31	942.2	46.0 --	0.523
	High RH	79	930.9	34.7 --	0.481
	Low plus High RH	110	934.1	37.9 --	0.396

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Note: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-4.
Interaction Table for CD5 Cells (cells/mm³)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-7)			
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)
Stratum	Initial Dioxin	n	Adjusted Mean ^a
Officer	Low	31	1,599.1
	Medium	13	2,003.7
	High	1	2,325.2
Enlisted Flyer	Low	16	1,662.5
	Medium	20	1,568.1
	High	11	1,730.6
Enlisted	Low	17	1,577.5
Groundcrew	Medium	32	1,550.4
	High	59	1,445.2

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-7)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d
Born ≥ 1942	Comparison	183	1,515.2		
	Background RH	47	1,447.9	-67.3 --	0.498
	Low RH	21	1,683.1	167.9 --	0.256
	High RH	65	1,581.9	66.7 --	0.459
	Low plus High RH	86	1,606.0	90.8 --	0.270
Born < 1942	Comparison	217	1,469.7		
	Background RH	93	1,600.7	131.0 --	0.090
	Low RH	74	1,392.2	-77.5 --	0.317
	High RH	41	1,540.4	70.7 --	0.498
	Low plus High RH	115	1,443.4	-26.3 --	0.700

Table O-2-4. (Continued)
Interaction Table for CD5 Cells (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Occupation: Table 19-7)

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d
Officer	Comparison	139	1,469.2		
	Background RH	99	1,531.2	62.0 --	0.426
	Low RH	39	1,466.7	-2.5 --	0.981
	High RH	6	2,730.2	1,261.0 --	<0.001
	Low plus High RH	45	1,593.3	124.1 --	0.235
Enlisted Flyer	Comparison	74	1,566.3		
	Background RH	13	1,576.8	10.5 --	0.956
	Low RH	25	1,440.3	-126.0 --	0.367
	High RH	22	1,418.8	-147.5 --	0.308
	Low plus High RH	47	1,430.2	-136.1 --	0.220
Enlisted Groundcrew	Comparison	187	1,458.8		
	Background RH	28	1,609.6	150.8 --	0.220
	Low RH	31	1,484.7	25.9 --	0.820
	High RH	78	1,505.1	46.3 --	0.558
	Low plus High RH	109	1,499.3	40.5 --	0.569

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of CD5 cells versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-5.
Interaction Table for CD8 Cells (cells/mm³)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-8)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	31	604.3	0.493 (0.172)	0.007
	Medium	13	861.3		
	High	1	1,284.9		
Enlisted Flyer	Low	16	657.5	-0.077 (0.062)	0.225
	Medium	20	536.5		
	High	11	552.3		
Enlisted Groundcrew	Low	17	592.6	0.002 (0.032)	0.958
	Medium	33	576.2		
	High	59	623.6		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-8)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d
Born ≥ 1942	Comparison	183	618.5		
	Background RH	47	594.3	-24.2 --	0.612
	Low RH	21	677.3	58.8 --	0.397
	High RH	65	606.9	-11.6 --	0.780
	Low plus High RH	86	623.4	4.9 --	0.899
Born < 1942	Comparison	217	646.1		
	Background RH	93	676.4	30.3 --	0.439
	Low RH	74	594.5	-51.6 --	0.184
	High RH	41	625.4	-20.7 --	0.689
	Low plus High RH	115	605.4	-40.7 --	0.231

Table O-2-5. (Continued)
Interaction Table for CD8 Cells (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY – ADJUSTED (Dioxin Category-by-Occupation: Table 19-8)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
Officer	Comparison	139	611.2		
	Background RH	99	607.9	-3.3 --	0.928
	Low RH	39	597.0	-14.2 --	0.778
	High RH	6	1,186.8	575.6 --	0.001
	Low plus High RH	45	654.2	43.0 --	0.394
Enlisted Flyer	Comparison	74	693.4		
	Background RH	13	620.6	-72.8 --	0.426
	Low RH	25	611.5	-81.9 --	0.238
	High RH	22	533.1	-160.3 --	0.020
	Low plus High RH	47	573.5	-119.9 --	0.027
Enlisted Groundcrew	Comparison	187	623.9		
	Background RH	28	750.2	126.3 --	0.050
	Low RH	31	609.3	-14.6 --	0.792
	High RH	78	618.1	-5.8 --	0.882
	Low plus High RH	109	615.6	-8.3 --	0.811

Table O-2-5. (Continued)
Interaction Table for CD8 Cells (cells/mm³)

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 19-8)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	84	604.3	0.111 (0.061)	0.074
	Medium	54	669.3		
	High	6	692.5		
Enlisted Flyer	Low	11	699.2	-0.043 (0.052)	0.421
	Medium	24	606.2		
	High	25	522.4		
Enlisted Groundcrew	Low	20	664.5	-0.029 (0.023)	0.210
	Medium	29	685.5		
	High	88	605.4		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of CD8 cells versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = ≤ 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Table O-2-6.
Interaction Table for CD14 Cells (cells/mm³)

		a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY – ADJUSTED (Dioxin Category-by-Age: Table 19-9)		
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b
Born ≥ 1942	Comparison	183	473.0	
	Background RH	47	468.9	-4.1 --
	Low RH	21	500.6	27.6 --
	High RH	65	480.5	7.5 --
Born < 1942	Comparison	220	508.7	
	Background RH	94	534.7	26.0 --
	Low RH	74	454.8	-53.9 --
	High RH	43	460.8	-47.9 --
	Low plus High RH	117	457.0	-51.7 --

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-7.
Interaction Table for CD16 + 56 Cells (cells/mm³)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-10)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)
	Initial Dioxin	n	Adjusted Mean ^a	
Officer	Low	31	245.6	0.515 (0.188) 0.007
	Medium	13	275.8	
	High	1	1,023.8	
Enlisted Flyer	Low	16	247.6	-0.098 (0.103) 0.345
	Medium	20	233.1	
	High	12	197.4	
Enlisted Groundcrew	Low	17	244.9	0.008 (0.053) 0.885
	Medium	34	234.4	
	High	59	246.9	

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Physical Activity Index: Table 19-10)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)
	Initial Dioxin	n	Adjusted Mean ^a	
Sedentary	Low	25	268.8	-0.002 (0.063) 0.980
	Medium	39	270.1	
	High	50	265.2	
Moderate	Low	14	156.3	0.175 (0.105) 0.099
	Medium	14	231.9	
	High	11	257.2	
Very Active	Low	25	284.8	-0.054 (0.092) 0.559
	Medium	14	205.0	
	High	11	279.0	

Table O-2-7. (Continued)
Interaction Table for CD16 + 56 Cells (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-10)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d
Officer	Comparison	138	240.5		
	Background RH	98	240.7	0.2 --	0.993
	Low RH	39	195.8	-44.7 --	0.044
	High RH	6	405.7	165.2 --	0.023
	Low plus High RH	45	215.7	-24.7 --	0.260
Enlisted Flyer	Comparison	74	255.4		
	Background RH	13	255.2	-0.2 --	0.997
	Low RH	25	236.4	-19.0 --	0.558
	High RH	22	188.6	-66.8 --	0.027
	Low plus High RH	47	212.7	-42.7 --	0.081
Enlisted Groundcrew	Comparison	187	255.4		
	Background RH	28	236.1	-19.3 --	0.491
	Low RH	30	241.2	-14.2 --	0.606
	High RH	78	249.8	-5.6 --	0.772
	Low plus High RH	108	247.4	-8.0 --	0.643

Table O-2-7. (Continued)
Interaction Table for CD16 + 56 Cells (cells/mm³)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 19-10)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
0 Drink-years	Comparison	20	235.5		
	Background RH	10	336.4	100.9 --	0.105
	Low RH	4	204.3	-31.2 --	0.635
	High RH	9	386.5	151.0 --	0.026
	Low plus High RH	13	317.6	82.1 --	0.128
>0-40 Drink-years	Comparison	276	245.2		
	Background RH	98	241.5	-3.7 --	0.824
	Low RH	63	207.4	-37.8 --	0.037
	High RH	72	217.8	-27.4 --	0.121
	Low plus High RH	135	212.9	-32.3 --	0.020
>40 Drink-years	Comparison	103	243.5		
	Background RH	31	207.4	-36.1 --	0.170
	Low RH	27	240.8	-2.7 --	0.925
	High RH	25	228.8	-14.7 --	0.615
	Low plus High RH	52	235.0	-8.5 --	0.702

Table O-2-7. (Continued)
Interaction Table for CD16 + 56 Cells (cells/mm³)

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Physical Activity Index: Table 19-10)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
Sedentary	Comparison	225	240.7		
	Background RH	76	236.6	-4.1 --	0.827
	Low RH	42	231.0	-9.7 --	0.660
	High RH	69	241.1	0.4 --	0.985
Moderate	Comparison	85	265.8		
	Background RH	26	261.6	-4.2 --	0.899
	Low RH	21	157.1	-108.7 --	<0.001
	High RH	18	238.3	-27.5 --	0.449
Very Active	Comparison	89	240.4		
	Background RH	37	233.9	-6.5 --	0.803
	Low RH	31	246.2	5.8 --	0.836
	High RH	19	212.9	-27.5 --	0.387
	Low plus High RH	50	233.0	-7.5 --	0.753

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of CD16+56 cells versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-8.
Interaction Table for CD20 Cells (cells/mm³)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 19-11)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>0</i> <i>Drink-years</i>	All	Ranch Hand	23	258.6	50.8 --	0.144
		Comparison	29	207.8		
<i>>0-40</i> <i>Drink-years</i>	All	Ranch Hand	249	232.4	6.9 --	0.502
		Comparison	327	225.5		
<i>>40</i> <i>Drink-years</i>	All	Ranch Hand	89	227.9	25.3 --	0.116
		Comparison	119	202.6		
<i>0</i> <i>Drink-years</i>	Officer	Ranch Hand	9	298.2	121.8 --	0.052
		Comparison	7	176.4		
	Enlisted Flyer	Ranch Hand	4	242.0	9.1 --	0.915
		Comparison	5	232.9		
	Enlisted Groundcrew	Ranch Hand	10	227.2	13.3 --	0.779
		Comparison	17	213.9		
<i>>0-40</i> <i>Drink-years</i>	Officer	Ranch Hand	104	221.2	15.1 --	0.325
		Comparison	122	206.1		
	Enlisted Flyer	Ranch Hand	42	238.6	-15.5 --	0.577
		Comparison	49	254.1		
	Enlisted Groundcrew	Ranch Hand	103	234.2	6.6 --	0.677
		Comparison	156	227.6		
<i>>40</i> <i>Drink-years</i>	Officer	Ranch Hand	40	213.1	12.7 --	0.602
		Comparison	44	200.4		
	Enlisted Flyer	Ranch Hand	17	219.9	11.1 --	0.752
		Comparison	29	208.8		
	Enlisted Groundcrew	Ranch Hand	32	244.1	45.8 --	0.095
		Comparison	46	198.3		

Table O-2-8. (Continued)
Interaction Table for CD20 Cells (cells/mm³)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 19-11)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
Born ≥ 1942	Low	10	323.5	-0.044 (0.049)	0.366
	Medium	29	249.7		
	High	47	239.3		
Born < 1942	Low	54	190.1	0.053 (0.047)	0.260
	Medium	36	212.4		
	High	24	218.1		

^a Transformed from natural logarithm (X+1) scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm (X+1) scale.

^c P-value is based on difference of means on natural logarithm (X+1) scale.

^d Slope and standard error based on natural logarithm (X+1) of CD20 cells versus log₂ dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Table O-2-9.
Interaction Table for CD25 Cells (cells/mm³)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-12)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Born ≥ 1942	Comparison	183	270.1		
	Background RH	47	254.1	-16.0 --	0.444
	Low RH	21	326.6	56.5 --	0.083
	High RH	65	265.7	-4.4 --	0.815
	Low plus High RH	86	279.5	9.4 --	0.584
Born < 1942	Comparison	216	268.4		
	Background RH	92	289.8	21.4 --	0.199
	Low RH	73	249.4	-19.0 --	0.257
	High RH	41	282.1	13.7 --	0.547
	Low plus High RH	114	260.7	-7.7 --	0.612

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-12)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Officer	Comparison	138	266.5		
	Background RH	98	276.3	9.8 --	0.560
	Low RH	39	257.6	-8.9 --	0.693
	High RH	6	454.0	187.5 --	0.006
	Low plus High RH	45	277.8	11.3 --	0.609
Enlisted Flyer	Comparison	74	284.0		
	Background RH	13	274.7	-9.3 --	0.817
	Low RH	25	245.8	-38.2 --	0.193
	High RH	22	229.1	-54.9 --	0.062
	Low plus High RH	47	237.8	-46.2 --	0.043
Enlisted Groundcrew	Comparison	187	266.2		
	Background RH	28	285.8	19.6 --	0.458
	Low RH	30	301.3	35.1 --	0.182
	High RH	78	274.4	8.2 --	0.631
	Low plus High RH	108	281.7	15.5 --	0.322

Table O-2-9. (Continued)
Interaction Table for CD25 Cells (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Cigarette Smoking History: Table 19-12)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Pack-years	Comparison	107	240.8		
	Background RH	44	232.0	-8.8 --	0.664
	Low RH	21	238.7	-2.1 --	0.937
	High RH	27	259.9	19.1 --	0.466
	Low plus High RH	48	251.8	11.0 --	0.634
>0-10 Pack-years	Comparison	113	272.1		
	Background RH	38	256.0	-16.1 --	0.495
	Low RH	25	292.1	20.0 --	0.509
	High RH	43	258.0	-14.1 --	0.532
	Low plus High RH	68	270.1	-2.0 --	0.917
>10 Pack-years	Comparison	179	280.8		
	Background RH	57	322.0	41.2 --	0.060
	Low RH	48	272.3	-8.5 --	0.689
	High RH	36	290.6	9.8 --	0.688
	Low plus High RH	84	280.0	-0.8 --	0.963

Table O-2-9. (Continued)
Interaction Table for CD25 Cells (cells/mm³)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 19-12)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Drink-years	Comparison	20	228.1		
	Background RH	10	284.9	56.8 --	0.228
	Low RH	4	327.1	99.0 --	0.151
	High RH	9	437.0	208.9 --	0.001
	Low plus High RH	13	399.7	171.6 --	0.001
>0-40 Drink-years	Comparison	276	270.1		
	Background RH	98	280.7	10.6 --	0.499
	Low RH	63	258.6	-11.5 --	0.519
	High RH	72	240.4	-29.7 --	0.069
	Low plus High RH	135	248.7	-21.4 --	0.106
>40 Drink-years	Comparison	103	265.6		
	Background RH	31	256.0	-9.6 --	0.708
	Low RH	27	269.4	3.8 --	0.888
	High RH	25	298.1	32.5 --	0.263
	Low plus High RH	52	282.9	17.3 --	0.422

Table O-2-9. (Continued)
Interaction Table for CD25 Cells (cells/mm³)

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table 19-12)			
Current Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a
0 Pack-years	Low	36	240.9
	Medium	27	252.6
	High	31	243.1
>0-10 Pack-years	Low	35	254.6
	Medium	29	271.0
	High	42	251.5
>10 Pack-years	Low	41	341.1
	Medium	60	266.7
	High	43	291.4

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of CD25 cells versus log₂ dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 6: Low = ≤ 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table O-2-10.
Interaction Table for CD4-CD8 Ratio

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Physical Activity Index: Table 19-13)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>Sedentary</i>	<i>All</i>	<i>Ranch Hand</i>	201	1.515	-0.027 --	0.651
		<i>Comparison</i>	268	1.542		
<i>Moderate</i>	<i>All</i>	<i>Ranch Hand</i>	66	1.658	0.282 --	0.005
		<i>Comparison</i>	99	1.376		
<i>Very Active</i>	<i>All</i>	<i>Ranch Hand</i>	94	1.522	0.091 --	0.294
		<i>Comparison</i>	108	1.431		
<i>Sedentary</i>	Officer	Ranch Hand	81	1.640	0.007 --	0.950
		Comparison	79	1.633		
	Enlisted Flyer	Ranch Hand	31	1.455	-0.016 --	0.906
		Comparison	51	1.471		
	Enlisted Groundcrew	Ranch Hand	89	1.442	-0.062 --	0.461
		Comparison	138	1.504		
	Moderate	Officer	28	1.647	0.278 --	0.067
		Comparison	43	1.369		
	Enlisted Flyer	Ranch Hand	13	1.773	0.229 --	0.378
		Comparison	15	1.544		
<i>Moderate</i>	Enlisted Groundcrew	Ranch Hand	25	1.641	0.295 --	0.060
		Comparison	41	1.346		
	Very Active	Officer	44	1.560	-0.042 --	0.755
		Comparison	51	1.602		
	Enlisted Flyer	Ranch Hand	19	1.598	0.379 --	0.051
		Comparison	17	1.219		
	Enlisted Groundcrew	Ranch Hand	31	1.470	0.108 --	0.443
		Comparison	40	1.362		

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Table O-2-11.
Interaction Table for Double Labelled Cells: CD3 with CD25 (cells/mm³)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-14)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Officer	Comparison	138	206.9		
	Background RH	98	216.9	10.0 --	0.469
	Low RH	39	203.1	-3.8 --	0.838
	High RH	6	385.0	178.1 --	0.002
	Low plus High RH	45	221.1	14.2 --	0.438
Enlisted Flyer	Comparison	74	224.3		
	Background RH	13	217.8	-6.5 --	0.848
	Low RH	25	188.4	-35.9 --	0.139
	High RH	22	183.3	-41.0 --	0.099
	Low plus High RH	47	186.0	-38.3 --	0.046
Enlisted Groundcrew	Comparison	187	217.1		
	Background RH	28	236.6	19.5 --	0.396
	Low RH	30	245.5	28.4 --	0.211
	High RH	78	222.5	5.4 --	0.715
	Low plus High RH	108	228.6	11.5 --	0.393

Table O-2-11. (Continued)
Interaction Table for Double Labelled Cells: CD3 with CD25 (cells/mm³)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Cigarette Smoking History: Table 19-14)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Pack-years	Comparison	107	187.9		
	Background RH	44	183.9	-4.0 --	0.813
	Low RH	21	181.3	-6.6 --	0.762
	High RH	27	198.0	10.1 --	0.638
	Low plus High RH	48	190.5	2.6 --	0.874
>0-10 Pack-years	Comparison	113	215.7		
	Background RH	38	205.9	-9.8 --	0.626
	Low RH	25	234.8	19.1 --	0.454
	High RH	43	207.6	-8.1 --	0.673
	Low plus High RH	68	217.2	1.5 --	0.927
> 10 Pack-years	Comparison	179	223.6		
	Background RH	57	257.0	33.4 --	0.072
	Low RH	48	218.1	-5.5 --	0.760
	High RH	36	234.8	11.2 --	0.590
	Low plus High RH	84	225.1	1.5 --	0.918

Table O-2-11. (Continued)
Interaction Table for Double Labelled Cells: CD3 with CD25 (cells/mm³)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 19-14)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Drink-years	Comparison	20	172.6		
	Background RH	10	245.8	73.2 --	0.070
	Low RH	4	266.7	94.1 --	0.103
	High RH	9	335.3	162.7 --	0.001
	Low plus High RH	13	312.4	139.8 --	0.001
>0-40 Drink-years	Comparison	276	215.2		
	Background RH	98	223.7	8.5 --	0.522
	Low RH	63	202.4	-12.8 --	0.388
	High RH	72	189.9	-25.3 --	0.067
	Low plus High RH	135	195.7	-19.5 --	0.078
>40 Drink-years	Comparison	103	210.1		
	Background RH	31	203.4	-6.7 --	0.757
	Low RH	27	219.0	8.9 --	0.699
	High RH	25	245.6	35.5 --	0.155
	Low plus High RH	52	231.4	21.3 --	0.246

Table O-2-11. (Continued)
Interaction Table for Double Labelled Cells: CD3 with CD25 (cells/mm³)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table 19-14)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
Pack-years	Low	36	185.8	-0.013 (0.036)	0.712
	Medium	27	191.1		
	High	31	179.8		
Pack-years	Low	35	197.2	0.001 (0.031)	0.988
	Medium	29	219.2		
	High	42	198.4		
Pack-years	Low	41	271.4	-0.043 (0.033)	0.196
	Medium	60	214.0		
	High	43	235.9		

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of CD3 with CD25 cells versus log₂ dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 6: Low = ≤ 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table O-2-12.
Interaction Table for Double Labelled Cells: CD4 with CD8
(Zero vs. Nonzero)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Race: Table 19-16)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)
	Initial Dioxin	n	Percent Zero	
Black	Low	5	20.0	--
	Medium	2	0.0	--
	High	5	0.0	--
Non-Black	Low	59	11.9	1.00 (0.70,1.43)
	Medium	63	7.9	
	High	66	15.2	

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Current Cigarette Smoking: Table 19-16)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)
	Initial Dioxin	n	Percent Zero	
0-Never Smoked	Low	15	13.3	0.86 (0.46,1.59) 0.626
	Medium	10	10.0	
	High	23	13.0	
0-Former Smoker	Low	42	14.3	0.91 (0.55,1.50) 0.713
	Medium	38	10.5	
	High	26	19.2	
>0 Cigarettes/Day	Low	4	0.0	5.15 (0.73,36.17) 0.099
	Medium	10	0.0	
	High	16	12.5	
>0-20 Cigarettes/Day	Low	3	0.0	-- --
	Medium	7	0.0	
	High	6	0.0	

^a Relative risk for a twofold increase in initial dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Table O-2-12. (Continued)
Interaction Table for Double Labelled Cells: CD4 with CD8 (cells/mm³)
(Nonzero Measurements)

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table 19-16)				
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)
		n	Adjusted Mean ^a	
0 Drink-years	Low	2	27.6	0.066 (0.134) 0.625
	Medium	3	25.9	
	High	5	30.9	
>0-40 Drink-years	Low	40	25.6	0.028 (0.045) 0.532
	Medium	39	28.0	
	High	40	25.7	
>40 Drink-years	Low	14	29.4	-0.038 (0.075) 0.616
	Medium	18	26.1	
	High	16	30.2	

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of CD4 with CD8 versus log₂ dioxin.

Note: Analysis based on measurements above 0 cells/mm³ only.

Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Table O-2-12. (Continued)
Interaction Table for Double Labelled Cells: CD4 with CD8 (cells/mm³)
(Nonzero Measurements)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-16)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Born ≥ 1942	Comparison	159	30.3		
	Background RH	38	30.4	0.1 --	0.975
	Low RH	20	39.7	9.4 --	0.089
	High RH	55	28.9	-1.4 --	0.649
	Low plus High RH	75	31.5	1.2 --	0.695
Born < 1942	Comparison	201	33.5		
	Background RH	88	37.7	4.2 --	0.180
	Low RH	65	27.1	-6.4 --	0.027
	High RH	40	30.7	-2.8 --	0.466
	Low plus High RH	105	28.4	-5.1 --	0.044

Table O-2-12. (Continued)
Interaction Table for Double Labelled Cells: CD4 with CD8 (cells/mm³)
(Nonzero Measurements)

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Race: Table 19-16)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Black	Comparison	15	46.2		
	Background RH	5	20.7	-25.5 --	0.021
	Low RH	5	25.4	-20.8 --	0.083
	High RH	7	32.5	-13.7 --	0.249
	Low plus High RH	12	29.3	-16.9 --	0.078
Non-Black	Comparison	345	28.6		
	Background RH	121	32.5	3.9 --	0.087
	Low RH	80	26.8	-1.8 --	0.434
	High RH	88	27.0	-1.6 --	0.476
	Low plus High RH	168	26.9	-1.7 --	0.328

Table O-2-12. (Continued)
Interaction Table for Double Labelled Cells: CD4 with CD8 (cells/mm³)
(Nonzero Measurements)

I) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-16)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Officer	Comparison	127	32.4		
	Background RH	89	31.7	-0.7 --	0.020
	Low RH	34	27.2	-5.2 --	0.083
	High RH	5	29.5	-2.9 --	0.249
	Low plus High RH	39	27.5	-4.9 --	0.078
Enlisted Flyer	Comparison	71	30.3		
	Background RH	12	35.8	5.5 --	0.087
	Low RH	23	29.9	-0.4 --	0.434
	High RH	21	32.1	1.8 --	0.476
	Low plus High RH	44	30.9	0.6 --	0.328
Enlisted Groundcrew	Comparison	162	31.9		
	Background RH	25	43.5	11.6 --	0.033
	Low RH	28	29.9	-2.0 --	0.632
	High RH	69	29.5	-2.4 --	0.427
	Low plus High RH	97	29.6	-2.3 --	0.392

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Note: Analysis based on measurements above 0 cells/mm³ only.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-13.
Interaction Table for Double Labelled Cells: CD3 with CD16+56
(Zero vs. Nonzero)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-17)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)
	Initial Dioxin	n	Percent Zero	
Officer	Low	31	3.2	--
	Medium	13	0.0	--
	High	1	0.0	--
Enlisted Flyer	Low	16	6.2	--
	Medium	20	0.0	--
	High	12	0.0	--
Enlisted Groundcrew	Low	17	0.0	2.30 (1.01,5.24)
	Medium	34	2.8	
	High	59	0.2	0.048

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Physical Activity Index: Table 19-17)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Zero	
Sedentary	Low	63	0.0	2.62 (1.45,4.76)
	Medium	51	2.0	
	High	78	7.7	0.002
Moderate	Low	22	4.5	0.93 (0.44,1.97)
	Medium	21	9.5	
	High	22	4.5	0.845
Very Active	Low	31	6.5	0.22 (0.03,1.89)
	Medium	35	0.0	
	High	21	0.0	0.169

Table O-2-13. (Continued)
Interaction Table for Double Labelled Cells: CD3 with CD16+56
(Zero vs. Nonzero)

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Physical Activity Index: Table 19-17)					
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)		
	Current Dioxin	n		Adjusted Relative Risk (95% C.I.) ^b	p-Value
Sedentary	Low	64	0.0	2.59 (1.44,4.64)	0.001
	Medium	54	1.9		
	High	74	8.1		
Moderate	Low	19	5.3	1.04 (0.54,2.00)	0.900
	Medium	25	4.0		
	High	21	9.5		
Very Active	Low	29	6.9	0.39 (0.08,1.84)	0.233
	Medium	37	0.0		
	High	21	0.0		

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Physical Activity Index: Table 19-17)					
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)		
	Current Dioxin	n		Adjusted Relative Risk (95% C.I.) ^b	p-Value
Sedentary	Low	64	0.0	2.45 (1.35,4.46)	0.003
	Medium	54	1.9		
	High	74	8.1		
Moderate	Low	19	5.3	0.98 (0.50,1.92)	0.953
	Medium	25	4.0		
	High	21	9.5		
Very Active	Low	29	6.9	0.37 90.08,1.73)	0.206
	Medium	37	0.0		
	High	21	0.0		

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 4: Low = ≤ 8.1 ppt; Medium = > 8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = ≤ 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table O-2-14.
Interaction Table for TLC (cells/mm³)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Physical Activity Index: Table 19-18)				Analysis Results for Log₂ (Initial Dioxin)	
Initial Dioxin Category Summary Statistics				Analysis Results for Log₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean^a	Adjusted Slope (Std. Error)^b	p-Value
Sedentary	Low	25	2,202.8	-0.033 (0.031)	0.288
	Medium	39	2,127.4		
	High	50	2,046.0		
Moderate	Low	14	1,771.2	0.124 (0.051)	0.017
	Medium	14	1,925.9		
	High	11	2,588.2		
Very Active	Low	25	2,086.7	-0.063 (0.044)	0.150
	Medium	14	1,934.1		
	High	11	1,785.0		

Table O-2-14. (Continued)
Interaction Table for TLC (cells/mm³)
(Continuous)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 19-18)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
Born ≥ 1942	Comparison	183	2,041.1		
	Background RH	47	1,958.0	-83.1 --	0.439
	Low RH	21	2,214.7	173.6 --	0.283
	High RH	65	2,106.7	65.6 --	0.502
	Low plus High RH	86	2,132.6	91.5 --	0.308
Born < 1942	Comparison	217	2,013.1		
	Background RH	93	2,120.7	107.6 --	0.200
	Low RH	74	1,926.7	-86.4 --	0.324
	High RH	41	1,959.4	-53.7 --	0.630
	Low plus High RH	115	1,938.3	-74.8 --	0.321

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of TLC versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-15.
Interaction Table for IgA (mg/dl)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Race: Table 19-19)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Black	Comparison	55	225.7		
	Background RH	14	204.3	-21.4 --	0.461
	Low RH	23	292.6	66.9 --	0.020
	High RH	13	234.3	8.6 --	0.787
	Low plus High RH	36	270.0	44.3 --	0.063
Non-Black	Comparison	996	218.7		
	Background RH	353	217.7	-1.0 --	0.875
	Low RH	233	207.0	-11.7 --	0.095
	High RH	242	216.2	-2.5 --	0.730
	Low plus High RH	475	211.6	-7.1 --	0.199

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval and difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on differences of means on natural logarithm scale.

Note: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Table O-2-16.
Interaction Table for IgG (mg/dl)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-20)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Officer	Comparison	395	1,127.8		
	Background RH	233	1,121.4	-6.4 --	0.754
	Low RH	101	1,077.4	-50.4 --	0.061
	High RH	9	897.4	-230.4 --	0.002
	Low plus High RH	110	1,061.4	-66.4 --	0.010
Enlisted Flyer	Comparison	172	1,142.6		
	Background RH	39	1,079.1	-63.5 --	0.141
	Low RH	54	1,072.5	-70.1 --	0.063
	High RH	53	1,117.3	-25.3 --	0.514
	Low plus High RH	107	1,094.7	-47.9 --	0.109
Enlisted Groundcrew	Comparison	468	1,152.5		
	Background RH	92	1,140.9	-11.6 --	0.688
	Low RH	98	1,171.1	18.6 --	0.509
	High RH	189	1,145.2	-7.3 --	0.736
	Low plus High RH	287	1,154.0	1.5 --	0.937

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval and difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on differences of means on natural logarithm scale.

Note: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Table O-2-17.
Interaction Table for IgM (mg/dl)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 19-21)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>Black</i>	<i>All</i>	<i>Ranch Hand</i>	55	79.6	<i>-19.1 --</i>	<i>0.027</i>
		<i>Comparison</i>	73	98.7		
<i>Non-Black</i>	<i>All</i>	<i>Ranch Hand</i>	871	106.1	<i>-0.1 --</i>	<i>0.986</i>
		<i>Comparison</i>	1,173	106.2		
<i>Black</i>	Officer	<i>Ranch Hand</i>	7	71.9	<i>-0.8 --</i>	<i>0.969</i>
		<i>Comparison</i>	6	72.7		
	Enlisted Flyer	<i>Ranch Hand</i>	10	78.7	<i>-31.0 --</i>	<i>0.135</i>
		<i>Comparison</i>	15	109.7		
	Enlisted Groundcrew	<i>Ranch Hand</i>	38	81.2	<i>-17.9 --</i>	<i>0.088</i>
		<i>Comparison</i>	52	99.1		
<i>Non-Black</i>	Officer	<i>Ranch Hand</i>	356	107.1	<i>0.9 --</i>	<i>0.831</i>
		<i>Comparison</i>	479	106.2		
	Enlisted Flyer	<i>Ranch Hand</i>	147	103.0	<i>-7.5 --</i>	<i>0.243</i>
		<i>Comparison</i>	185	110.5		
	Enlisted Groundcrew	<i>Ranch Hand</i>	368	106.5	<i>1.8 --</i>	<i>0.632</i>
		<i>Comparison</i>	509	104.7		

Table O-2-17. (Continued)
Interaction Table for IgM (mg/dl)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Physical Activity Index: Table 19-21)							
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b		p-Value ^c
<i>Sedentary</i>	<i>All</i>	<i>Ranch Hand</i>	531	93.4	-6.7 --	0.026	
		<i>Comparison</i>	700	100.1			
<i>Moderate</i>	<i>All</i>	<i>Ranch Hand</i>	165	96.6	-1.4 --	0.795	
		<i>Comparison</i>	235	98.0			
<i>Very Active</i>	<i>All</i>	<i>Ranch Hand</i>	230	106.2	11.8 --	0.013	
		<i>Comparison</i>	311	94.4			
<i>Sedentary</i>	Officer	<i>Ranch Hand</i>	189	95.1	-7.6 --	0.150	
		<i>Comparison</i>	238	102.7			
	Enlisted Flyer	<i>Ranch Hand</i>	87	87.4	-15.1 --	0.037	
		<i>Comparison</i>	125	102.5			
	Enlisted Groundcrew	<i>Ranch Hand</i>	255	94.1	-3.3 --	0.442	
		<i>Comparison</i>	337	97.4			
<i>Moderate</i>	Officer	<i>Ranch Hand</i>	72	98.1	4.2 --	0.604	
		<i>Comparison</i>	107	93.9			
	Enlisted Flyer	<i>Ranch Hand</i>	33	100.7	-5.3 --	0.698	
		<i>Comparison</i>	35	106.0			
	Enlisted Groundcrew	<i>Ranch Hand</i>	60	92.8	-7.1 --	0.414	
		<i>Comparison</i>	93	99.9			
<i>Very Active</i>	Officer	<i>Ranch Hand</i>	102	103.9	12.0 --	0.085	
		<i>Comparison</i>	140	91.9			
	Enlisted Flyer	<i>Ranch Hand</i>	37	105.4	4.6 --	0.721	
		<i>Comparison</i>	40	100.8			
	Enlisted Groundcrew	<i>Ranch Hand</i>	91	108.9	13.8 --	0.068	
		<i>Comparison</i>	131	95.1			

Table O-2-17. (Continued)
Interaction Table for IgM (mg/dl)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Physical Activity Index: Table 19-21)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Sedentary	Comparison	574	99.3		
	Background RH	193	93.3	-6.0 --	0.173
	Low RH	139	93.2	-6.1 --	0.220
	High RH	164	92.0	-7.3 --	0.115
	Low plus High RH	303	92.5	-6.8 --	0.069
Moderate	Comparison	195	96.9		
	Background RH	70	110.9	14.0 --	0.077
	Low RH	51	83.8	-13.1 --	0.092
	High RH	39	94.0	-2.9 --	0.753
	Low plus High RH	90	88.1	-8.8 --	0.171
Very Active	Comparison	266	92.4		
	Background RH	102	99.5	7.1 --	0.246
	Low RH	63	118.1	25.7 --	0.001
	High RH	48	107.2	14.8 --	0.083
	Low plus High RH	111	113.3	20.9 --	0.001

Table O-2-17. (Continued)
Interaction Table for IgM (mg/dl)

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 19-21)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
0-1 Drinks/Day	Low	223	89.5	0.019 (0.014)	0.176
	Medium	218	90.0		
	High	239	93.3		
>1-4 Drinks/Day	Low	58	120.9	-0.091 (0.037)	0.016
	Medium	71	115.4		
	High	44	84.0		
>4 Drinks/Day	Low	7	83.8	-0.168 (0.126)	0.213
	Medium	3	178.6		
	High	6	49.8		

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of IgM versus \log_2 dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Table O-2-18.
Interaction Table for Lupus Panel: Antinuclear Antibody (ANA)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 19-22)					
Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0 Drink-years	Comparison	53	17.0		
	Background RH	20	10.0	0.58 (0.11,2.96)	0.509
	Low RH	15	20.0	1.18 (0.27,5.10)	0.827
	High RH	23	13.0	0.80 (0.19,3.30)	0.756
	Low plus High RH	38	15.8	0.95 (0.30,2.97)	0.931
>0-40 Drink-years	Comparison	701	17.0		
	Background RH	255	15.3	0.80 (0.54,1.20)	0.281
	Low RH	167	17.4	0.97 (0.62,1.52)	0.898
	High RH	162	11.1	0.71 (0.41,1.21)	0.206
	Low plus High RH	329	14.3	0.85 (0.58,1.23)	0.388
>40 Drink-years	Comparison	279	16.8		
	Background RH	86	17.4	0.96 (0.50,1.84)	0.913
	Low RH	68	7.4	0.38 (0.15,1.01)	0.053
	High RH	63	11.1	0.70 (0.30,1.64)	0.411
	Low plus High RH	131	9.2	0.52 (0.27,1.03)	0.060

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Race: Table 19-22)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Black	Low	11	27.3	0.34 (0.12,0.91)	0.032
	Medium	21	9.5		
	High	17	0.0		
Non-Black	Low	275	16.4	0.97 (0.84,1.12)	0.713
	Medium	267	15.0		
	High	268	11.6		

Table O-2-18. (Continued)
Interaction Table for Lupus Panel: Antinuclear Antibody (ANA)

c) MODEL 4: RANCH HANDS – CURRENT DIOXIN – ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 19-22)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0 Drinks/Day	Low	17	5.9	1.11 (0.69,1.79)	0.663
	Medium	18	16.7		
	High	23	17.4		
>0-40 Drinks/Day	Low	201	16.4	0.97 (0.82,1.15)	0.729
	Medium	193	17.1		
	High	190	10.5		
>40 Drinks/Day	Low	68	20.6	0.83 (0.61,1.13)	0.230
	Medium	77	7.8		
	High	72	9.7		

d) MODEL 5: RANCH HANDS – CURRENT DIOXIN – ADJUSTED (Current Dioxin-by-Race: Table 19-22)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Black	Low	12	25.0	0.36 (0.15,0.89)	0.027
	Medium	22	9.1		
	High	15	0.0		
Non-Black	Low	278	15.1	0.99 (0.88,1.12)	0.856
	Medium	264	16.3		
	High	268	11.6		

e) MODEL 5: RANCH HANDS – CURRENT DIOXIN – ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 19-22)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0 Drink-years	Low	18	11.1	1.07 (0.71,1.61)	0.741
	Medium	14	21.4		
	High	26	11.5		
>0-40 Drink-years	Low	203	15.3	0.99 (0.86,1.15)	0.921
	Medium	198	17.2		
	High	183	11.5		
>40 Drink-years	Low	69	17.4	0.87 (0.69,1.10)	0.246
	Medium	74	10.8		
	High	74	9.5		

Table O-2-18. (Continued)
Interaction Table for Lupus Panel: Antinuclear Antibody (ANA)

f) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Race: Table 19-22)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Present	
Black	Low	12	25.0	0.36 (0.15,0.88) 0.026
	Medium	22	9.1	
	High	15	0.0	
Non-Black	Low	277	15.2	0.96 (0.85,1.10) 0.591
	Medium	264	16.3	
	High	268	11.6	

g) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 19-22)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Present	
0	Low	18	11.1	1.05 (0.70,1.57) 0.830
	Medium	14	21.4	
	High	26	11.5	
>0-40	Low	202	15.3	0.96 (0.83,1.13) 0.645
	Medium	198	17.2	
	High	183	11.5	
>40	Low	69	17.4	0.85 (0.67,1.08) 0.193
	Medium	74	10.8	
	High	74	9.5	

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 143 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table O-2-19.
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Cigarette Smoking: Table 19-23)						
Stratum	Occupational Category	Group	n	Percent Present	Adj. Relative Risk (95% C.I.)	p-Value
<i>0-Never Smoked</i>	<i>All</i>	<i>Ranch Hand</i>	245	2.0	<i>0.49 (0.18,1.40)</i>	<i>0.184</i>
		<i>Comparison</i>	343	4.1		
<i>0-Former Smoker</i>	<i>All</i>	<i>Ranch Hand</i>	422	5.2	<i>1.85 (0.97,3.51)</i>	<i>0.060</i>
		<i>Comparison</i>	604	3.0		
<i>>0-20 Cigarettes/Day</i>	<i>All</i>	<i>Ranch Hand</i>	151	3.3	<i>2.93 (0.56,15.34)</i>	<i>0.204</i>
		<i>Comparison</i>	187	1.1		
<i>>20 Cigarettes/Day</i>	<i>All</i>	<i>Ranch Hand</i>	97	8.2	--	--
		<i>Comparison</i>	109	0.0		
<i>0-Never Smoked</i>	Officer	Ranch Hand	131	1.5	<i>0.49 (0.16,1.49)</i>	<i>0.208</i>
		Comparison	188	4.8		
	Enlisted Flyer	Ranch Hand	24	4.2	<i>0.78 (0.14,4.42)</i>	<i>0.776</i>
		Comparison	26	0.0		
	Enlisted Groundcrew	Ranch Hand	90	2.2	<i>0.48 (0.14,1.60)</i>	<i>0.231</i>
		Comparison	129	3.9		
<i>0-Former Smoker</i>	Officer	Ranch Hand	175	4.0	<i>1.74 (0.74,4.08)</i>	<i>0.204</i>
		Comparison	234	2.6		
	Enlisted Flyer	Ranch Hand	82	6.1	<i>2.77 (0.67,11.50)</i>	<i>0.160</i>
		Comparison	106	2.8		
	Enlisted Groundcrew	Ranch Hand	165	6.1	<i>1.71 (0.74,3.95)</i>	<i>0.209</i>
		Comparison	264	3.4		
<i>>0-20 Cigarettes/Day</i>	Officer	Ranch Hand	34	5.9	<i>2.67 (0.43,16.40)</i>	<i>0.289</i>
		Comparison	34	2.9		
	Enlisted Flyer	Ranch Hand	24	4.2	<i>4.26 (0.54,33.85)</i>	<i>0.171</i>
		Comparison	46	0.0		
	Enlisted Groundcrew	Ranch Hand	93	2.2	<i>2.63 (0.48,14.39)</i>	<i>0.266</i>
		Comparison	107	0.9		
<i>>20 Cigarettes/Day</i>	Officer	Ranch Hand	19	21.1	--	--
		Comparison	28	0.0		
	Enlisted Flyer	Ranch Hand	24	0.0	--	--
		Comparison	21	0.0		
	Enlisted Groundcrew	Ranch Hand	54	7.4	--	--
		Comparison	60	0.0		

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table 19-23)						
Stratum	Occupational Category	Group	n	Percent Present	Adj. Relative Risk (95% C.I.)	p-Value
<i>0-1 Drinks/Day</i>	All	Ranch Hand	715	4.9	1.78 (1.07,2.96)	0.026
		Comparison	989	2.8		
<i>>1-4 Drinks/Day</i>	All	Ranch Hand	182	2.2	0.90 (0.24,3.40)	0.873
		Comparison	214	2.3		
<i>>4 Drinks/Day</i>	All	Ranch Hand	18	5.6	2.49 (0.15,42.36)	0.528
		Comparison	40	2.5		
<i>0-1 Drinks/Day</i>	Officer	Ranch Hand	251	4.0	1.45 (0.67,3.11)	0.341
		Comparison	364	3.3		
	Enlisted Flyer	Ranch Hand	124	5.6	3.48 (0.87,13.97)	0.079
		Comparison	154	1.9		
	Enlisted Groundcrew	Ranch Hand	340	5.3	1.79 (0.87,3.66)	0.111
		Comparison	471	2.8		
<i>>1-4 Drinks/Day</i>	Officer	Ranch Hand	101	4.0	0.74 (0.18,3.00)	0.674
		Comparison	108	3.7		
	Enlisted Flyer	Ranch Hand	25	0.0	1.78 (0.27,11.52)	0.546
		Comparison	34	0.0		
	Enlisted Groundcrew	Ranch Hand	56	0.0	0.92 (0.21,4.03)	0.907
		Comparison	72	1.4		
<i>>4 Drinks/Day</i>	Officer	Ranch Hand	7	14.3	1.89 (0.10,34.03)	0.667
		Comparison	12	0.0		
	Enlisted Flyer	Ranch Hand	5	0.0	4.53 (0.21,97.28)	0.335
		Comparison	11	0.0		
	Enlisted Groundcrew	Ranch Hand	6	0.0	2.33 (0.13,41.91)	0.566
		Comparison	17	5.9		

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

© MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 19-23)						
Stratum	Occupational Category	Group	n	Percent Present	Adj. Relative Risk (95% C.I.)	p-Value
<i>0 Drink-years</i>	All	Ranch Hand	62	3.2	0.72 (0.12,4.46)	0.722
		Comparison	69	4.3		
<i>>0-40 Drink-years</i>	All	Ranch Hand	620	4.4	1.30 (0.76,2.21)	0.343
		Comparison	847	3.4		
<i>>40 Drink-years</i>	All	Ranch Hand	233	4.7	7.94 (1.75,36.00)	0.007
		Comparison	327	0.6		
<i>0 Drink-years</i>	Officer	Ranch Hand	14	0.0	0.55 (0.08,3.85)	0.551
		Comparison	22	9.1		
	Enlisted Flyer	Ranch Hand	13	7.7	1.27 (0.14,11.80)	0.835
		Comparison	12	8.3		
	Enlisted Groundcrew	Ranch Hand	35	2.9	0.75 (0.11,4.91)	0.763
		Comparison	35	0.0		
<i>>0-40 Drink-years</i>	Officer	Ranch Hand	250	4.4	1.02 (0.48,2.19)	0.950
		Comparison	337	3.9		
	Enlisted Flyer	Ranch Hand	94	3.2	2.34 (0.57,9.58)	0.236
		Comparison	121	0.8		
	Enlisted Groundcrew	Ranch Hand	276	4.7	1.38 (0.66,2.92)	0.394
		Comparison	389	3.9		
<i>>40 Drink-years</i>	Officer	Ranch Hand	95	4.2	6.07 (1.22,30.27)	0.028
		Comparison	125	0.8		
	Enlisted Flyer	Ranch Hand	47	6.4	13.89 (1.98,97.61)	0.008
		Comparison	66	1.5		
	Enlisted Groundcrew	Ranch Hand	91	4.4	8.20 (1.65,40.75)	0.010
		Comparison	136	0.0		

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

d) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Current Cigarette Smoking: Table 19-23)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log₂ (Initial Dioxin)
	Initial Dioxin	n	Percent Present	
0-Never Smoked	Low	45	0.0	1.25 (0.48,3.26) 0.648
	Medium	36	0.0	
	High	49	4.1	
0-Former Smoker	Low	88	6.8	1.02 (0.68,1.53) 0.936
	Medium	79	6.3	
	High	63	9.5	
>0-20 Cigarettes/Day	Low	23	13.0	0.10 (0.01,1.18) 0.067
	Medium	28	0.0	
	High	33	0.0	
>20 Cigarettes/Day	Low	12	16.7	0.37 (0.10,1.39) 0.141
	Medium	24	8.3	
	High	18	0.0	

e) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table 19-23)				
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log₂ (Initial Dioxin)
	Initial Dioxin	n	Percent Present	
0 Drink-years	Low	10	0.0	5.03 (0.17,152.38) 0.353
	Medium	12	0.0	
	High	16	6.3	
>0-40 Drink-years	Low	116	4.3	0.98 (0.68,1.41) 0.893
	Medium	108	5.6	
	High	105	4.8	
>40 Drink-years	Low	42	14.3	0.40 (0.16,0.98) 0.045
	Medium	47	2.1	
	High	42	4.8	

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

**f) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Current Cigarette Smoking: Table 19-23)**

Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0-Never Smoked	Comparison	276	4.3		
	Background RH	106	1.9	0.41 (0.19,0.90)	0.026
	Low RH	68	0.0	--	--
	High RH	62	3.2	0.75 (0.35,1.60)	0.461
	Low plus High RH	130	1.5	0.34 (0.07,1.53)	0.157
0-Former Smoker	Comparison	516	2.9		
	Background RH	164	3.0	1.11 (0.51,2.41)	0.792
	Low RH	123	7.3	2.61 (1.14,5.98)	0.023
	High RH	107	7.5	2.89 (1.37,6.11)	0.005
	Low plus High RH	230	7.4	2.73 (1.33,5.58)	0.006
>0 Cigarettes/Day	Comparison	241	0.4		
	Background RH	91	6.6	15.82 (7.28,34.38)	<0.001
	Low RH	59	10.2	23.81 (6.68,84.88)	<0.001
	High RH	79	1.3	2.97 (1.41,6.27)	0.004
	Low plus High RH	138	5.1	11.74 (1.44,95.58)	0.021

**g) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Current Alcohol Use: Table 19-23)**

Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0-1 Drinks/Day	Comparison	820	2.9		
	Background RH	277	3.2	1.11 (0.51,2.44)	0.792
	Low RH	191	7.3	2.49 (1.26,4.92)	0.009
	High RH	203	5.4	1.98 (0.94,4.16)	0.072
	Low plus High RH	394	6.3	2.24 (1.26,4.00)	0.006
>1 Drinks/Day	Comparison	213	1.9		
	Background RH	84	4.8	2.56 (0.62,10.55)	0.194
	Low RH	59	1.7	0.88 (0.10,8.02)	0.910
	High RH	45	0.0	--	--
	Low plus High RH	104	1.0	0.51 (0.06,4.62)	0.551

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 19-23)					
Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.)^b	p-Value
0 Drink-years	Comparison	53	3.8		
	Background RH	20	5.0	1.48 (0.13,17.50)	0.755
	Low RH	15	0.0	--	--
	High RH	23	4.3	1.19 (0.10,13.74)	0.892
	Low plus High RH	38	2.6	0.69 (0.06,8.03)	0.769
>0-40 Drink-years	Comparison	701	3.4		
	Background RH	255	3.9	1.15 (0.52,2.52)	0.730
	Low RH	167	5.4	1.53 (0.69,3.37)	0.296
	High RH	162	4.3	1.30 (0.55,3.04)	0.551
	Low plus High RH	329	4.9	1.42 (0.71,2.83)	0.323
>40 Drink-years	Comparison	279	0.7		
	Background RH	86	2.3	3.26 (0.45,23.44)	0.240
	Low RH	68	8.8	12.43 (2.44,63.32)	0.002
	High RH	63	4.8	7.67 (1.26,46.74)	0.027
	Low plus High RH	131	6.9	10.30 (2.12,50.01)	0.004

Table O-2-19. (Continued)
Interaction Table for Lupus Panel: Thyroid Microsomal Antibody

i) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 19-23)			
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
Stratum	Current Dioxin	n	Percent Present
0-1 Drinks/Day	Low	222	3.2
	Medium	218	6.9
	High	239	5.4
>1-4 Drinks/Day	Low	58	3.4
	Medium	71	2.8
	High	44	0.0
>4 Drinks/Day	Low	7	14.3
	Medium	3	0.0
	High	6	0.0

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

^c Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Table O-2-20.
Interaction Table for Lupus Panel: MSK Parietal Antibody

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 19-26)						
Stratum	Occupational Category	Group	n	Percent Present	Adj. Relative Risk (95% C.I.)	p-Value
<i>Black</i>	<i>All</i>	<i>Ranch Hand</i>	55	5.5	--	--
		<i>Comparison</i>	73	0.0		
<i>Non-Black</i>	<i>All</i>	<i>Ranch Hand</i>	871	2.2	<i>0.75 (0.42,1.32)</i>	<i>0.316</i>
		<i>Comparison</i>	1,173	2.8		
<i>Black</i>	Officer	Ranch Hand	7	0.0	--	--
		Comparison	6	0.0		
	Enlisted Flyer	Ranch Hand	10	10.0	--	--
		Comparison	15	0.0		
	Enlisted Groundcrew	Ranch Hand	38	5.3	--	--
		Comparison	52	0.0		
<i>Non-Black</i>	Officer	Ranch Hand	356	3.1	<i>1.41 (0.59,3.37)</i>	<i>0.440</i>
		Comparison	479	2.1		
	Enlisted Flyer	Ranch Hand	147	1.4	<i>0.70 (0.15,3.25)</i>	<i>0.650</i>
		Comparison	185	2.2		
	Enlisted Groundcrew	Ranch Hand	368	1.6	<i>0.42 (0.17,1.03)</i>	<i>0.057</i>
		Comparison	509	3.7		

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Table O-2-21.
Interaction Table for Lupus Panel: Rheumatoid Factor

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 19-27)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)	
	Initial Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Born ≥ 1942	Low	55	18.2	0.71 (0.51,0.98)	0.038
	Medium	72	9.7		
	High	109	10.1.		
Born < 1942	Low	116	18.1	0.91 (0.67,1.23)	0.548
	Medium	100	14.0		
	High	59	18.6		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 19-27)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)	
	Initial Dioxin	n	Percent Present	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Officer	Low	76	14.5	1.55 (0.66,3.60)	0.312
	Medium	33	21.2		
	High	1	100.0		
Enlisted Flyer	Low	35	25.7	0.36 (0.17,0.76)	0.008
	Medium	43	9.3		
	High	30	3.3		
Enlisted Groundcrew	Low	60	18.3	2.78 (2.15,3.60)	<0.001
	Medium	96	10.4		
	High	137	14.6		

Table O-2-21. (Continued)
Interaction Table for Lupus Panel: Rheumatoid Factor

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 19-27)					
Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.)^b	p-Value
Officer	Comparison	395	19.7		
	Background RH	234	13.7	0.65 (0.42,1.02)	0.064
	Low RH	101	16.8	0.77 (0.43,1.39)	0.388
	High RH	9	22.2	1.08 (0.22,5.32)	0.925
Enlisted Flyer	Comparison	172	18.6		
	Background RH	39	15.4	0.85 (0.33,2.21)	0.738
	Low RH	54	24.1	1.45 (0.69,3.03)	0.323
	High RH	53	1.9	0.08 (0.01,0.60)	0.014
	Low plus High RH	107	13.1	0.66 (0.33,1.31)	0.233
Enlisted Groundcrew	Comparison	468	13.7		
	Background RH	92	22.8	1.92 (1.10,3.38)	0.023
	Low RH	98	16.3	1.24 (0.68,2.25)	0.486
	High RH	189	12.7	0.93 (0.56,1.54)	0.777
	Low plus High RH	287	13.9	1.03 (0.68,1.59)	0.875

Table O-2-21. (Continued)
Interaction Table for Lupus Panel: Rheumatoid Factor

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Physical Activity Index: Table 19-27)					
Stratum	Dioxin Category	n	Percent Present	Adjusted Relative Risk (95% C.I.)^b	p-Value
Sedentary	Comparison	574	17.8		
	Background RH	193	15.5	0.84 (0.53,1.32)	0.450
	Low RH	139	13.7	0.73 (0.43,1.24)	0.244
	High RH	164	11.6	0.63 (0.37,1.08)	0.092
	Low plus High RH	303	12.5	0.68 (0.46,1.03)	0.066
Moderate	Comparison	195	13.3		
	Background RH	70	27.1	2.41 (1.23,4.73)	0.011
	Low RH	51	23.5	1.92 (0.89,4.15)	0.098
	High RH	39	7.7	0.56 (0.16,1.98)	0.371
	Low plus High RH	90	16.7	1.30 (0.65,2.61)	0.459
Very Active	Comparison	266	17.3		
	Background RH	102	9.8	0.51 (0.25,1.06)	0.071
	Low RH	63	23.8	1.48 (0.76,2.87)	0.249
	High RH	48	10.4	0.59 (0.22,1.58)	0.290
	Low plus High RH	111	18.0	1.08 (0.60,1.94)	0.792

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table O-2-22.
Interaction Table for Lupus Panel: B Cell Clones Detected by Serum Protein Electrophoresis

a) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 19-28)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Present	
0-1 Drinks/Day	Low	227	1.8	1.09 (0.76,1.56)
	Medium	218	1.8	
	High	235	1.7	
>1-4 Drinks/Day	Low	59	5.1	0.95 (0.58,1.53)
	Medium	68	7.4	
	High	46	2.2	
>4 Drinks/Day	Low	6	16.7	--
	Medium	4	0.0	
	High	6	0.0	

b) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 19-28)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Present	
0-1 Drinks/Day	Low	226	1.8	1.05 (0.72,1.53)
	Medium	218	1.8	
	High	235	1.7	
>1-4 Drinks/Day	Low	59	5.1	0.91 (0.56,1.50)
	Medium	68	7.4	
	High	46	2.2	
>4 Drinks/Day	Low	6	16.7	--
	Medium	4	0.0	
	High	6	0.0	

^a Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Low = ≤ 46 ppq; Medium = $> 46-128$ ppq; High = > 128 ppq.

Table O-2-23.
Interaction Table for Lupus Panel: Other Antibodies (ANA and MSK)

a) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Race: Table 19-29)					
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)		
	Current Dioxin	n		Adjusted Relative Risk (95% C.I.) ^a	p-Value
Black	Low	12	8.3	0.13 (0.01,3.20)	0.210
	Medium	23	0.0		
	High	15	0.0		
Non-Black	Low	279	3.2	1.15 (0.90,1.46)	0.276
	Medium	268	3.0		
	High	276	3.3		

^a Relative risk for a twofold increase in current dioxin.

Note: Low = \leq 46 ppq; Medium = $>$ 46-128 ppq; High = $>$ 128 ppq.